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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/695,226 | 10/25/2000 | Paul D. Marko | 39566 | 2888 |
| 7590 | 02/24/2005 | | EXAMINER | |
| Stacey J Longanecker Roylance Abrams Berdo & Goodman LLP 1300 19th Street NW Suite 600 Washington, DC 20036 | | | PHUNKULH, BOB A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2661 | |
| DATE MAILED: 02/24/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) |
|------------------------------|------------------------|---------------------|
| | 09/695,226 | MARKO ET AL. |
| | Examiner | Art Unit |
| | Bob A. Phunkulh | 2661 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 September 2004.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 4-6 and 10-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 4-6 and 10-23 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 October 2000 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

DETAILED ACTION

This communication is in response to applicant's 09/29/2004 amendment(s)/response(s) in the application of **Marko et al.** for "**Method and Apparatus for Employing Stored Content of Receivers to Improve Efficiency of Broadcast System Bandwidth Use**" filed 10/25/2000. The amendments/response to the claims have been entered. Claims 1-3, 7-9, have been canceled. Claims 20-23 have been added. Claims 4-6, 10-23 are now pending.

Drawings

The drawings are objected to because some of labels are not readable. In figure 5 the label 58 is point to both MUX and DMUX. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 recites the limitation "said index data" in line 22. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4-6, 10-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Picco et al. (US 6,029,045), hereinafter Picco.

Regarding claim 14, Picco discloses a transmitter in a digital broadcast system comprising (see figure 4):

an input device for receiving content segments (local content 108, figure 4);

a memory device for storing index data for identifying predefined content segments stored at remote locations (a database 146 that stores the local content. The local content database may store a plurality of pieces of local content such as a plurality of advertisements. Each piece of local content may also include the content profile, see figure 4 and col. 6 line 57 to col. 7 line 2);

a multiplexer for multiplexing selected said content segments with at least said index - data to generate a broadcast signal having, said broadcast signal comprising said content segments with said index data inserted at selected being used by receiver units at said remote locations to playback said content segments (the multiplexer 140, see figure 4).

Regarding claim 15, Picco discloses an apparatus for generating an output signal from a broadcast signal in a digital broadcast system comprising:

a memory device for storing content segments (disk 186, see figures 7 or 8);
an output device for playing back said output signal (either audio or video or graphics outputs, see figures 7 and 8);
a receiver for receiving said broadcast signal, said broadcast signal comprising control data to indicate which said content segments to playback via said output device and when said content segments are to be played back, said receiver being operable to extract said control data from said broadcast signal (see figures 7 and 8);
a processing device configured to receive said control data from said receiver, to generate a control signal used by said memory device to retrieve selected ones of

said control segments in accordance with said control data, and to playback the selected said control segments substantially in real-time with respect to said broadcast signal (the CPU 188, see figures 7-8; and col. 10 lines 34 to col. 13 line 35 for detail).

Regarding claim 16, Picco discloses the control data in said broadcast signal comprises segment data corresponding to each of the selected ones of said content segments for playback, said segment data for a content segment comprising progress information indicating how much of the content segment remains to be played back via said output device at any given point during the duration of the content segment for substantially real-time playback during reception of said broadcast signal (see col. 10 lines 57-63, and col. 11 line 35-48).

Regarding claim 17, Picco discloses the control data in said broadcast signal comprises segment data corresponding to each of the selected ones of said content segments for playback, said segment data for a content segment being transmitted in lieu of the content in the content segment to reduce bandwidth used to transmit said broadcast signal (col. 11 line 35-48).

Regarding claim 18, Picco discloses the segment data has substantially the same duration for transmission in said broadcast signal as the content in the content segment to which said segment data corresponds (see figure 2)

Regarding claim 19, Picco discloses the segment data for a content segment comprises a content segment index used by said processing device to locate the content segment in said local storage device, and progress information indicating how much of the content segment remains to be played back, said content segment index and said progress information requiring less bandwidth for transmission in said broadcast signal than the content in the content segment (see figures 10 and 11).

Regarding claim 20, Picco discloses a user playback apparatus for generating an output signal from a broadcast signal in a digital broadcast system comprising:

a memory device for storing predefined content segments (disk 186 stored the local content downloaded before insertion or viewing by the user, see col. 9 line 41-48);

a receiver for receiving said broadcast signal following transmission via the digital broadcast system, said broadcast signal comprising content segments and control data provided among the content segments to indicate when the predefined content segments are to be inserted in the output signal by the apparatus, the receiver being operable to extract the content segments and the control data from the broadcast signal (the combination decoder 182 and transponder stream (TS) 184 received and extract the content segments transmit by the uplink facility 102, see col. 6 line 59 to col. 7 line 2);

an output device for playing back the output signal (either audio or video or graphics outputs, see figures 7 and 8);

a processing device configured to receive the control data from the receiver and to generate a control signal used by the memory device to retrieve selected ones of the predefined content segments in accordance with the control data (CPU 188, see figures 7 and 8); and

a multiplexer configured to receive as inputs the control signal generated by the processing device, the content segments from the receiver and the selected predefined content segments and to generate the output signal using the content segments received by the receiver and inserting the predefined content segments among the content segments in accordance with the control data (the combination of MUX audio 206 and MUX video 208, see figure 8);

wherein the memory device comprises index data with which the identify each of the predefined content segments stored therein (of local content may also include the content profile as described below, a unique content identified code, a total time of the piece of local content, use statistics about the piece of local content, and utilization directives, such as an insert channel list, a view interval, a time of day the local content may be viewed, an expiration date of the local content or a maximum number of times a piece of local content may be viewed, see col. 6 line 57 to col. 7 line 2), and the control data comprises the index data corresponding to the selected the predefined content segments, the processing device being operable to provide the index data in the control data in the control signal for retrieving the predefined content segments corresponding thereto for the memory device (see col. 12 lines 24-58).

Regarding claim 5, Piccio discloses the processing device is programmable to allow said predefined content segments in said memory device to be updated (see col. 12 lines 37-58).

Regarding claim 6, Piccio discloses the receiver is operable to receive broadcast content in said broadcast signal for updating said predefined content segments, and said processing device is operable to control said memory device to perform at least one of a plurality of updating operations comprising deleting selected ones of said predefined content segments, adding more predefined content segments, and substituting received said predefined content segments for previously stored ones of said predefined content segments (the local content are updated based on the viewer's profiles, see col. 12 lines 37-58).

Regarding claim 21, Picco discloses a user playback apparatus for generating an output signal from a broadcast signal in a digital broadcast system comprising:

- a memory device for storing predefined content segments (disk 186 stored the local content downloaded before insertion or viewing by the user, see col. 9 line 41-48);

a receiver for receiving said broadcast signal following transmission via the digital broadcast system, said broadcast signal comprising content segments and control data provided among the content segments to indicate when the predefined content segments are to be inserted in the output signal by the apparatus, the receiver being operable to extract the content segments and the control data from the

broadcast signal (the combination decoder 182 and transponder stream (TS) 184 received and extract the content segments transmit by the uplink facility 102, see col. 6 line 59 to col. 7 line 2);

an output device for playing back the output signal (either audio or video or graphics outputs, see figures 7 and 8);

a processing device configured to receive the control data from the receiver and to generate a control signal used by the memory device to retrieve selected ones of the predefined content segments in accordance with the control data (CPU 188, see figures 7 and 8); and

a multiplexer configured to receive as inputs the control signal generated by the processing device, the content segments from the receiver and the selected predefined content segments and to generate the output signal using the content segments received by the receiver and inserting the predefined content segments among the content segments in accordance with the control data (the combination of MUX audio 206 and MUX video 208, see figure 8);

wherein the broadcast signal comprises content segment progress data (content profile) for providing a time index for playing back one of the predefined content segments associated therewith, the multiplexer being controllable to play back live broadcast content corresponding to received the content segments in the broadcast signal in substantially real-time in the output signal, the receiver being operable to extract the index data and corresponding the content progress data in the broadcast signal as the broadcast signal is received, the processing device being

operable to general signal the control signal to instruct the multiplexer to insert selected the predefined content segments among the segments of program content using the index data and the content progress data to determine when the selected the predefined content segments are to be played back as the broadcast signal is received (see col. 6 lines 59-67; and the CPU 188 control the MUXs, see figure 8).

Regarding claim 22, Picco discloses a method for generating an output at a receiver using a broadcast signal transmitted in a digital broadcast system comprising the steps of:

storing predefined content segments in a memory device associated with the receiver (disk 186 in the receiver stores the predefined content segments, see figure 8);

receiving the broadcast signal at the receiver following transmission via the digital broadcast system, the broadcast signal comprising segments of program content and segment of control data (the broadcast signal is transmit by the transmitter 154 (figure 4), where the signal comprising local content for storing in disk 186 including control data, see col. 6 line 59 to col. 7 line 2; and col. 9 line 40-48; col. 12 lines 24-58);

accessing and retrieving selected the predefined content segments identified by the control data from the memory device (col. 11 lines 49-51); and

playing back the selected the predefined content segments at selected points in the output signal in accordance with the control data (the output data from the set top box 120 is play in the terminal 122, see figure 3);

wherein the memory device comprises index data (content profiles, see col. 6 lines 59 to col. 7 line 2) with which to identify each of the predefine content segments stored therein, and the control data comprises the index data corresponding to the selected the predefined content segments, the accessing step comprises the step of providing the index data in the control data to a processing device for retrieving the predefined content segments corresponding thereto form the memory device (see col. 6 lines 59 to col. 7 line 2).

Regarding claim 11, Picco discloses the step of updating said predefined content segments in said memory device (see col. 12 lines 37-58).

Regarding claim 12, Picco discloses the updating step comprises the step of receiving broadcast content in said broadcast signal for updating said predefined content segments (col. 12 lines 37-59).

Regarding claim 13, Picco discloses the updating step comprises the step of retrieving program content stored on a portable storage medium to update said predefined content segments in said memory device (col. 9 line 61 to col. 10 line 33).

Regarding claim 23, Picco discloses a method for generating an output at a receiver using a broadcast signal transmitted in a digital broadcast system comprising the steps of:

storing predefined content segments in a memory device associated with the receiver (disk 186 in the receiver stores the predefined content segments, see figure 8);

receiving the broadcast signal at the receiver following transmission via the digital broadcast system, the broadcast signal comprising segments of program content and segment of control data (the broadcast signal is transmit by the transmitter 154 (figure 4), where the signal comprising local content for storing in disk 186 including control data, see col. 6 line 59 to col. 7 line 2; and col. 9 line 40-48; col. 12 lines 24-58);

accessing and retrieving selected the predefined content segments identified by the control data from the memory device (col. 11 lines 49-51); and
playing back the selected the predefined content segments at selected points in the output signal in accordance with the control data (the output data from the set top box 120 is play in the terminal 122, see figure 3);

wherein the broadcast signal comprises content segment progress data for providing a time index (content profile includes a time of day the content may be viewed, see col. 6 lines 59-67) for playing back one of the said predefined content segments associated therewith, the playing back step comprising the steps of:

playing back live broadcast content in the broadcast signal in substantially real-time in the output signal;

extracting the index data and corresponding the content progress data in the broadcast signal as the broadcast signal is received; and

inserting the selected the predefined content segments among the segments of program content using the index data and the content progress data to determine when the selected the predefined content segments are to be played back as the broadcast signal is received (see col. 10 line 62 to col. 11 line 1; col. 12 line 24-58).

Regarding claim 11, Picco discloses the step of updating said predefined content segments in said memory device (col. 9 line 61 to col. 10 line 33).

Response to Arguments

Applicant's arguments filed 9/29/2004 have been fully considered but they are not persuasive.

In response to the applicant's argument in page 10, Picco discloses each splicer inserts the selected pieces of local content into the video and audio data streams, where the splicers are controlled by the CPU 188 (see col. 11 lines 49-54 and col. 12 lines 24-33).

Conclusion

Conclusion

Any response to this action should be mailed to:

The following address mail to be delivered by the United States Postal Service (USPS) only:

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Bob A. Phunkulh** whose telephone number is **(571) 272-3083**. The examiner can normally be reached on Monday-Tursday from 8:00 A.M. to 5:00 P.M. (first week of the bi-week) and Monday-Friday (for second week of the bi-week).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor **Chau T. Nguyen** can be reach on **(571) 272-3126**. The fax phone number for this group is **(703) 872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bob A. Phunkulh

Bob A. Phunkulh

TC 2600
Art Unit 2661
February 16, 2005

BOB PHUNKULH
PRIMARY EXAMINER